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Preliminary Amendment

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-56. (Cancelled)

57.   (New Claim) A method for forming an image of an organic object comprising:

a) illuminating said object with light in the absence of a bioconcentrator which is capable of forming a complex between an analyte and a biological;

b) forming an image of said organic object using Raman shifted light from said object;

c) analyzing said Raman shifted light image for patterns characteristic of said organic object.

58.   (New Claim) A method for forming an image of an object according to claim 57 further comprising passing said Raman shifted light through a filter selected from the group consisting of a FAST fiber array spectral translator, a Fabry Perot angle tuned filter, an acousto-optic tunable filter, a liquid

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crystal tunable filter, a Lyot filter, and an Evan's split element liquid crystal

tunable filter.

59.   (New Claim)   A method for forming an image of an object

according to claim 57 further comprising passing said Raman shifted light

through an interferometer selected from the group consisting of a

polarization-independent imaging interferometer, a Michelson interferometer, a

Sagnac interferometer, a Twynam-Green Interferometer, and a Mach-Zehnder

Interferometer.

60.   (New Claim)   A method for forming an image of an object

according to claim 57 further comprising dispersing said Raman shifted light

thereby providing spatially separated Raman spectra.

61.   (New Claim)   A method for forming an image of an object

according to claim 57 further comprising providing spatially separated Raman

spectra.

62.   (New Claim)   A method for forming an image of an object

according to claim 57 further comprising gathering information from said first

image and forming a second image using said information.

63.   (New Claim) A method for forming an image of an object according to claim 57 wherein said information comprises a location of said object.

64.   (New Claim) A method for forming an image of an object according to claim 57 wherein said information comprises a characterization of said object.

65.   (New Claim) A method for forming an image of an object according to claim 57 further comprising forming an image of at least one anthrax spore.

66.   (New Claim) A method for forming an image of an object according to claim 57 further comprising forming an image of an object selected from the group consisting of filoviruses, naviruses, alphaviruses.

67.   (New Claim) A method for forming an image of an object according to claim 57 further comprising forming an image of an object selected from the group of microorganisms consisting of protozoa, cryptosporidia microorganisms, Escherichia coli, Escherichia coli 157 microorganisms, .Plague (Yersinia pestis), Smallpox (variola major), Tularemia (Francisella tularensis), Brucellosis (Brucella species), Clostridium perfringens, Salmonella, Shigella, Glanders (Burkholderia mallei), Melioidosis (Burkholderia pseudomallei),

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Psittacosis (Chlamydia psittaci), Q fever (Coxiella burnetii), Typhus fever

(Rickettsia prowazekii), and Vibrio cholerae.

68.   (New Claim) A method for forming an image of an object according

to claim 57 further comprising forming an image of an object selected from the

group consisting of filoviruses, naviruses, alphaviruses.

69.   (New Claim) A method for forming an image of an object

according to claim 57 further comprising forming an image of an object selected

from the group of consisting of Giardia, Candida albicans, Enterococcus faecalis,

Staphylococcus epidermidis, Staphylococcus aureus, Enterobacter aerogenes,

Corynebacterium diphtheriae, Pseudomonas eruginosa, Acinetobacter

calcoaceticus, Klebsiella pneumoniae, and Serratia marcescens.

70.   (New Claim) A method for forming an image of one of a plurality of

organic objects comprising:

        a) providing said plurality of organic objects in a bio-dilute sample;

        b) illuminating said sample with light in the absence of a

bioconcentrator which is capable of forming a complex between an analyte and a

biological;

        c) forming an image of one of said plurality of organic objects using

Raman shifted light from said imaged organic object;

d) analyzing said Raman shifted light image for patterns

characteristic of said organic object.

71.   (New Claim) A method for forming an image of an object

according to claim 70 further comprising passing said Raman shifted light

through a filter selected from the group consisting of a FAST fiber array spectral

translator, a Fabry Perot angle tuned filter, an acousto-optic tunable filter, a liquid

crystal tunable filter, a Lyot filter, and an Evan's split element liquid crystal

tunable filter.

72.   (New Claim) A method for forming an image of an object

according to claim 70 further comprising passing said Raman shifted light

through an interferometer selected from the group consisting of a

polarization-independent imaging interferometer, a Michelson interferometer, a

Sagnac interferometer, a Twynam-Green Interferometer, and a Mach-Zehnder

Interferometer.

73.   (New Claim) A method for forming an image of an object

according to claim 70 further comprising dispersing said Raman shifted light

thereby providing spatially separated Raman spectra.

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74.   (New Claim) A method for forming an image of an object according to claim 70 further comprising providing spatially separated Raman spectra.

75.   (New Claim) A method for forming an image of an object according to claim 70 further comprising gathering information from said first image and forming a second image using said information.

76.   (New Claim) A method for forming an image of an object according to claim 70 wherein said information comprises a location of said object.

77.   (New Claim) A method for forming an image of an object according to claim 70 wherein said information comprises a characterization of said object.

78.   (New Claim) A method for forming an image of an object according to claim 70 further comprising forming an image of at least one anthrax spore.

79.   (New Claim) A method for forming an image of an object according to claim 70 further comprising forming an image of an object selected from the group consisting of filoviruses, naviruses, alphaviruses.

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80.   (New Claim) A method for forming an image of an object
according to claim 70 further comprising forming an image of an object selected
from the group of microorganisms consisting of protozoa, cryptosporidia
microorganisms, Escherichia coli, Escherichia coli 157 microorganisms, .Plague
(Yersinia pestis), Smallpox (variola major), Tularemia (Francisella tularensis),
Brucellosis (Brucella species), Clostridium perfringens, Salmonella, Shigella,
Glanders (Burkholderia mallei), Melioidosis (Burkholderia pseudomallei),
Psittacosis (Chlamydia psittaci), Q fever (Coxiella burnetii), Typhus fever
(Rickettsia prowazekii), and Vibrio cholerae.

81.   (New Claim) A method for forming an image of an object according
to claim 70 further comprising forming an image of an object selected from the
group consisting of filoviruses, naviruses, alphaviruses.

82.   (New Claim) A method for forming an image of an object
according to claim 70 further comprising forming an image of an object selected
from the group of consisting of Giardia, Candida albicans, Enterococcus faecalis,
Staphylococcus epidermidis, Staphylococcus aureus, Enterobacter aerogenes,
Corynebacterium diphtheriae, Pseudomonas eruginosa, Acinetobacter
calcoaceticus, Klebsiella pneumoniae, and Serratia marcescens.

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83.   (New Claim)   A method for forming an image of one of a plurality of pathogenic microorganisms comprising:

a) providing a bio-dilute sample of said plurality of pathogenic microorganisms;

b) illuminating said bio-dilute sample with light in the absence of a bioconcentrator which is capable of forming a complex between an analyte and a biological;

c) forming an image of one of said plurality of pathogenic microorganisms using Raman shifted light from said imaged pathogenic microorganism;

d) analyzing said Raman shifted light image for patterns characteristic of said one of said plurality of pathogenic microorganisms.

84.   (New Claim)   A method for forming an image of an organic object comprising:

a) illuminating a biodilute sample including said organic object with light in the absence of a bioconcentrator which is capable of forming a complex between an analyte and a biological;

b) forming an image of said illuminated organic object using Raman shifted light from said object;

c) analyzing said Raman shifted light image for patterns characteristic of said organic object.

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